

APPLICANT(S): SHEPHERD, James et al.
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Listing of Claims:

1. (Previously presented) A video process comprising the steps of
receiving an interlaced sequence of input fields organized in a plurality of frames;
identifying a cut between first and second input fields;
identifying whether the cut occurs at a frame boundary; and
where a cut occurs otherwise than at a frame boundary, generating from said second field a synthetic field and replacing said first field by said synthetic field,
the process thereby outputting a interlaced sequence of output fields in which the cut is positioned at a frame boundary, the sequence of output fields containing the same number of fields as the sequence of input fields.
2. (Original) A process according to claim 1, wherein the second field appears after the first field in the temporal sequence.
3. (Original) A process according to claim 1, wherein the step of generating a synthetic field from said second field, comprises a step of motion compensation such that objects represented in said second field are positioned in said synthetic field at the locations they are estimated to occupy at the time associated with said first field.
4. (Original) A process according to claim 1, wherein the step of generating a synthetic field from said second field, comprises a step of interpolation such that objects represented in said second field are positioned in said synthetic field with the vertical positioning associated with said first field.
5. (Previously presented) Video processing apparatus comprising
a video input adapted to receive an interlaced sequence of input pictures organized in a plurality of frames;
a control input adapted to receive video cut information;
means for identifying a video cut occurring otherwise than at a frame boundary;
and
processing means for outputting an interlaced sequence of output pictures organized in a plurality of frames with each cut occurring otherwise than at a frame

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boundary in the input sequence being automatically retimed to occur at a frame boundary in the output sequence, the sequence of output fields containing the same number of fields as the sequence of input fields.

6. (Original) Apparatus according to claim 5, wherein said automatic retiming operates to bring a cut forward in time such that any motion discontinuity occurs after the cut in the output sequence.

7. (Original) Apparatus according to claim 5, wherein said retiming comprises the step of generating a synthetic field through motion compensation.

8. (Original) Apparatus according to claim 5, wherein said retiming comprises the step of generating a synthetic field through interpolation.

9. (Previously presented) A video process comprising the steps of
receiving a sequence of input fields organized in a plurality of frames;
identifying a cut between first and second input fields;
identifying whether the cut occurs at a frame boundary; and,
where a cut occurs otherwise than at a frame boundary, retiming the cut,
the process thereby outputting a interlaced sequence of output fields in which each cut is positioned at a frame boundary, the sequence of output fields containing the same number of fields as the sequence of input fields.

10. (Previously presented) A process according to claim 9, wherein the step of retiming comprises generating a synthetic field through motion compensation.

11. (Original) A process according to claim 9, wherein the step of retiming comprises generating a synthetic field through interpolation.

12. (Previously presented) Video processing apparatus comprising
a video input adapted to receive a sequence of input frames;
a video output adapted to provide a sequence of output fields organized in a plurality of frames;
a field predictor adapted to receive a base field and to generate therefrom a synthetic field having a different timing;

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a field sequence detector;

a video cut detector, and

a field substitution element controlled through said field sequence detector and said video cut detector to substitute a synthetic field at a cut occurring otherwise than at a frame boundary, thereby to retime the cut to occur at a frame boundary in the output sequence.